WHAT IS CLAIMED IS:

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1. A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle

5 structure includes generally interconnected

• structural members that form a frame for the vehicle

and generally planar interconnected panels that

define a shape of the vehicle;

a low transmittance glass window positioned

10 within the vehicle structure, wherein said low
transmittance glass window increases a thermal
resistance of the vehicle; and

an energy efficient thermal management system providing exterior thermal management and interior thermal management for the vehicle, wherein said energy efficient thermal management system consumes less thermal energy as a result of the increased thermal resistance of the vehicle.

2. A thermally energy efficient vehicle as set forth in claim 1 wherein a thermally efficient structural material is utilized for a structural member, to reduce a thermal mass of said structural member.

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3. A thermally energy efficient vehicle as set forth in claim 1 wherein an energy efficient insulator is attached to a portion of said vehicle structure to increase a thermal resistance of the 5 vehicle.

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4. A thermally energy efficient vehicle as set forth in claim 3 wherein said energy efficient insulator provides a thermal barrier and an acoustic barrier.

5. A thermal y energy efficient vehicle as set forth in claim 3 wherein said energy efficient insulator is a gas-filled panel.

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- 6. A thermally energy efficient vehicle as set forth in claim 1 wherein said low transmittance glass window includes two parallel sheets of glass separated by an air gap, to improve a thermal resistance of the low transmittance glass.
- 7. A thermally energy efficient vehicle as set forth in claim 6 wherein said low transmittance glass includes a solar reflective film attached to an outside surface of one of the two parallel sheets of glass.

8. A thermally energy efficient vehicle as set forth in claim 6 wherein said low transmittance glass includes a desiccant material disposed within the air gap between the two parallel sheets of glass.

9. A thermally energy efficient vehicle as set forth in claim 6 wherein the two parallel sheets of glass are made from a glass/polycarbonate 10 composite material.

as set forth in claim 1 wherein a thermal energy consumption capacity of the energy efficient thermal management system is reduced by increasing the thermal resistance of the vehicle.

11. A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle, wherein a thermally efficient structural material is utilized for a

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structural member, to reduce a thermal mass of the vehicle;

a low transmittance glass window positioned the vehicle /structure, wherein said low 5 transmittance glass /window includes two parallel sheets of glass sepatated by an air gap, to increase a thermal resistance of the vehicle; and

enerdy efficient thermal management system providing / exterior thermal management 10 interior thermal /management for the vehicle, wherein a thermal energy consumption capacity of said energy efficient thermal management system is decreased since said energy efficient thermal management system consumes less thermal energy resulting from 15 increased thermal resistance and reduced thermal mass of the vehieq le.

A the mally energy efficient vehicle as set forth in claim 11 wherein an energy efficient 20 insulator is attached / a portion of said vehicle structure to increase a thermal resistance of the vehicle.

13. A thermally energy efficient vehicle forth in claim 12 / wherein 25 as set said energy

efficient insulator provides a thermal barrier and an acoustic barrier.

- 14. A thermally energy efficient vehicle
 5 as set forth in claim 13 wherein said energy
 efficient insulator is a gas-filled panel.
- as set forth in claim 11 wherein said low transmittance glass includes a solar reflective film attached to an outside surface of one of the two parallel sheets of glass.
- 16. A thermally energy efficient vehicle as set forth in claim 11 wherein said low transmittance glass includes a desiccant material disposed within the air gap between the two parallel sheets of glass.

17. A thermally energy efficient vehicle as set forth in claim 11 wherein the two parallel sheets of glass are made from a glass/polycarbonate

composite material.

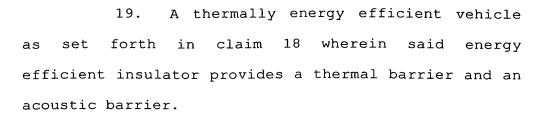
25 00 18. A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle, wherein a thermally efficient structural material is utilized for a structural member, to reduce a thermal mass of the vehicle;

an energy efficient insulator attached to a 10 portion of said vehicle structure to increase a thermal resistance of the vehicle

a low transmittance glass window positioned within the vehicle structure, wherein said low transmittance glass window includes two parallel sheets of glass separated by an air gap, to increase the thermal resistance of the vehicle; and

an energy efficient thermal management system providing exterior thermal management and interior thermal management for the vehicle, wherein a thermal energy consumption capacity of said energy efficient thermal management system is decreased since said energy efficient thermal management system consumes less thermal energy resulting from the increased thermal resistance and reduced thermal mass of the vehicle.



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20. A thermally energy efficient vehicle as set forth in claim 18 wherein said energy efficient insulator is a gas-filled panel.